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Optics
Telescopes

FIG. 1.

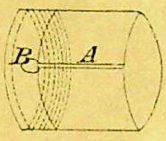


FIG. 2.

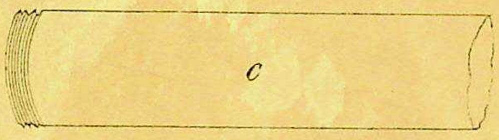


FIG. 3.

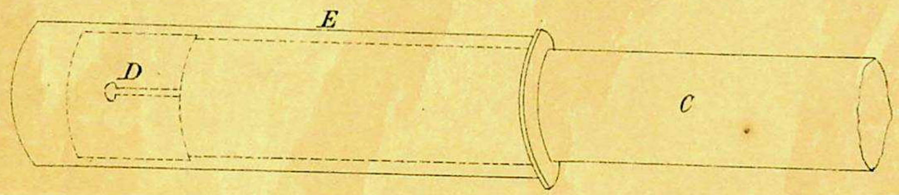
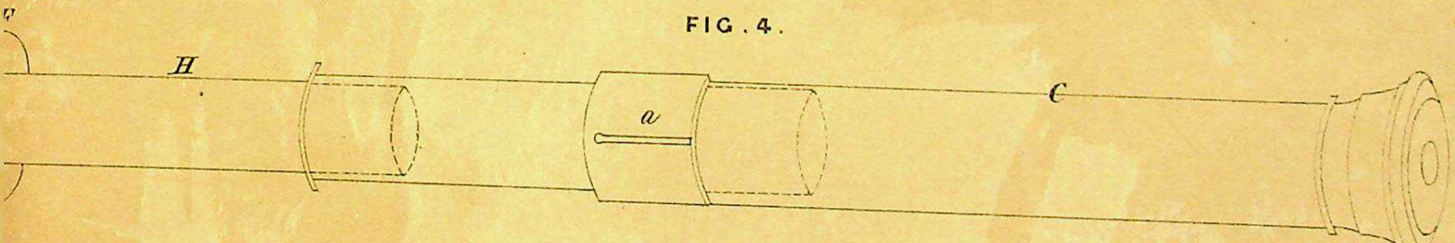
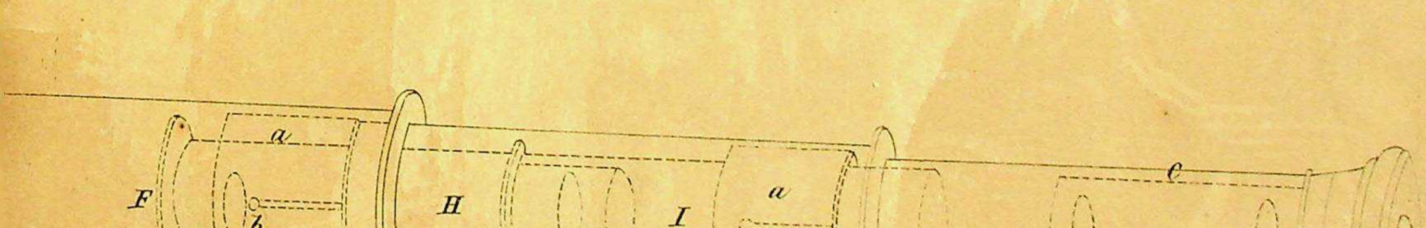


FIG. 4.





359/425

B. OPTICS,
Telescopes.

Optics
Telescopes

A.D. 1800 . . . . N° 2407.

Telescopes.

ADAMS' SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, DUDLEY ADAMS, of Fleet Street, in the City of London, Optician, send greeting.

WHEREAS His most Excellent Majesty King George the Third, by His Royal Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Thirtieth day of May, in the fortieth year of His reign, did give and grant unto me, the said Dudley Adams, my ex̄ors, adm̄ors, and assigns, His special licence, sole priviledge and authority, during the term of fourteen years, to make, use, exercise, and vend, within that part of Great Britain called England, the Dominion of Wales, and the Town of Berwick-upon-Tweed, my Invention of "A MODE OF RENDERING TELESCOPES, PERSPECTIVE, PROSPECT, AND OTHER OPTICAL GLASSES, MORE PORTABLE THAN HAS HITHERTO BEEN EXECUTED;" in which said Letters Patent there is contained a proviso obliging me, the said Dudley Adams, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of my said Invention, and in what manner the same is to be performed, and cause the same to be inrolled in His Majesty's High Court of Chancery within one calendar month next and immediately after the date of the said recited Letters Patent, as in and by the same, relation being thereunto had, may more fully and at large appear.

NOW KNOW YE, that I, the said Dudley Adams, in pursuance of and compliance with such proviso in the said recited Letters Patent contained, do, by this instrument under my hand and seal, particularly explain and describe the nature of my said Invention and the manner in which the same is to be performed, by the Drawings, references, and explanations herein contained and set forth, that is to say:—

The principle and utility on which my new Invention on telescopes, perspective, prospect, and other optical glasses is, founded is, in rendering them by this new construction considerably more portable than they have hitherto been made. In order to produce the peculiar degree of portability that has been effected, it was found expedient to adopt a new species of spring that would from its principle and construction occupy the least possible space, and at the same time render the telescopes to which it was applied strong and steady when drawn out; this was the more necessary as, according to the new construction, the number of joints or tubes would be augmented considerably beyond the number hitherto employed. It was necessary also to devise some means by which the several glasses applied to the eye ends of telescopes should acquire their true positions and distances when the joints or tubes were drawn out after having been compressed into a small space, and the same be retained in every situation wherein they might be placed by the observer during the time the telescope was being adjusted for use.

REFERENCE TO THE DRAWING.

Fig. 1: A represents the form and construction of the spring; it consists of a thin piece of metal tube turned in a lathe strictly true and cylindrical, and to fit the inside of the drawer or tube in which it is intended to slide. It is then slit down from the open end in two, three, four, or more places to give it elasticity; this latter circumstance is not however absolutely necessary. The dotted lines at B represent the under side of the spring perforated, in which a screw is cut, of the size to screw on the end of the tube at C, Fig. 2, and made fast there.

This inverted cylindrical spring, simple as it is in its construction, affords all the advantages necessary; it occupies less space than the springs hitherto adopted, and by that means, admits of more drawers, tubes, or joints being added than could, according to the former mode, be used or applied within the same space; by its cylindrical form, that strength and steadiness is obtained which is so essential to the constructing a good telescope with drawers; it preserves the axis thereof as one uninterrupted line in every position of the drawers, whether they are drawn out to the fullest extent, or returned in part into their several tubes. It is also of superior advantage and the best adapted to the construction of plated telescopes, whether plated in gold or silver, or whether the drawers or tubes are lacquer'd, painted, or japanned, &c.; as by its action and principle all pressure and friction on their polished, plated, or painted surfaces may be obviated, and the possibility of those surfaces being rubbed, scratched, or worn thereby, totally prevented. Fig. 3 represents the tube C, with the spring thereon at D; E represents the tube in which it slides.

The second part of the Invention is effected in the following manner:—Fig. 4: C represents the tube called the eye tube, or that which is placed next the eye when the telescope is being used; A, the spring thereon; H and I, two tubes that are made to slide into the interior of the tube C; E, a broad circular plate, shoulder, or flanch. To explain the action andprinciple of the tubes H and I more fully, another Figure, viz^t^, Fig. 5, has been given; C represents the tube to be placed next the eye; *a* the new inverted cylindrical spring thereon; D, the next tube in which the said spring slides, provided also with its spring *a*, which slides in the third tube E. The first and second glasses are contained in the eye tube C, and are represented by dotted lines G, G. The third and fourth glass are inserted in the tube H, at *b*, *c*. These tubes, as have been mentioned, are made to slide into the interior of the eye tube C when the instrument is closed, but when the tubes are drawn out they will have nearly the effect as represented, for when the tubes C, D, and E are drawn out, the flanch F will strike against the end of the tube D, and by that means the two tubes H and I will also be drawn out, and will retain their present position until all the tubes are nearly closed; for it is not until the flanch F reaches one of the last tubes, that the two tubes H and I will be forced into the tube C. The glasses, therefore, contained in them will acquire and retain their true distances while being used.

The advantages of this part of the Invention need not be enlarged upon, as it will appear obvious to every one who considers the subject, that by means thereof, together with the new spring, the utmost portability in telescopes may be effected, and their length, in consequence, be considerably extended beyond what is usually adopted, if necessary.

The same degree of portability and any degree of length may be obtained by the addition of three, four, or more tubes in the place of the two already mentioned, and the tube containing the first and second glasses might be constructed after the same manner, viz^t, to consist of two, three, or more tubes, and made to slide one within the other; and in some instances where the telescopes are very long, one tube might be made, perhaps, to answer the purpose. These and other similar modes, might hereafter be adopted without altering the principle of this Invention, which establishes a rule whereby the several glasses at the eye ends of telescopes may, from the manner in which they are placed, be brought near to each other, and afterwards placed at their proper distances without inconvenience or prejudice to the telescope. Of the many modes that have been tried, and named herein, the particular one adopted has been preferred; it is the most simple, and it moreover possesses all the advantages required.

In witness whereof, I have hereunto set my hand and seal, this Twenty-first day of June, in the fortieth year of the reign of our Sovereign Lord George the Third, and in the year of our Lord One thousand eight hundred.

DUDLEY ADAMS. (L.S.)

Signed and sealed in the presence of
THO^{S} DODD, Tavistock Street.
WILLIAM SKEWERING, Fleet St.

HOLFORD.

AND BE IT REMEMBERED, that on the Twenty-first day of June, in the year of our Lord 1800, the aforesaid Dudley Adams came before our Lord the King in His Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stampt according to the tenor of the Statutes made for that purpose.

Inrolled the Twenty-first day of June, in the year of our Lord One thousand eight hundred.

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1856.